

How To Access Data With Python

The following Python code example demonstrates how to configure a connection to download data from an Earthdata Login enabled server. Note that you will need to a secure way to configure the Earthdata Login username and password.

```
#!/usr/bin/python
from cookielib import CookieJar
from urllib import urlencode

import urllib2

# The user credentials that will be used to authenticate access to the
data

username = "<Your Earthdata login username>"
password = "<Your Earthdata login password>"

# The url of the file we wish to retrieve

url =
"http://e4ftl01.cr.usgs.gov/MOLA/MYD17A3H.006/2009.01.01/MYD17A3H.A20090
01.h12v05.006.2015198130546.hdf.xml"

# Create a password manager to deal with the 401 reponse that is
returned from
# Earthdata Login

password_manager = urllib2.HTTPPasswordMgrWithDefaultRealm()
password_manager.add_password(None, "https://urs.earthdata.nasa.gov",
username, password)

# Create a cookie jar for storing cookies. This is used to store and
return
# the session cookie given to use by the data server (otherwise it will
just
# keep sending us back to Earthdata Login to authenticate). Ideally, we
# should use a file based cookie jar to preserve cookies between runs.
This
# will make it much more efficient.

cookie_jar = CookieJar()

# Install all the handlers.

opener = urllib2.build_opener(
    urllib2.HTTPBasicAuthHandler(password_manager),
    #urllib2.HTTPHandler(debuglevel=1),      # Uncomment these two lines
```

```
to see
    #urllib2.HTTPSHandler(debuglevel=1),    # details of the
requests/responses
    urllib2.HTTPCookieProcessor(cookie_jar))
urllib2.install_opener(opener)

# Create and submit the request. There are a wide range of exceptions
that
# can be thrown here, including HTTPError and URLError. These should be
# caught and handled.

request = urllib2.Request(url)
response = urllib2.urlopen(request)

# Print out the result (not a good idea with binary data!)

body = response.read()
```

```
print body
```

Accessing Data from NSIDC:

NSIDC has provided sample scripts to access their data with Python:



NSIDC_SingleDL.py



NSIDC_Parse_HTML_BatchDL.py